2002 Air Quality Highlights

Ground-Level Ozone in St. Louis

During the 2002 **ozone** season, there were seven **exceedances** of the one-hour **ozone** standard in the St. Louis area, including five in Missouri. This represents an increase of five from the 2001 **ozone** season. In spite of this increase, all sites in the St. Louis area now meet the **National Ambient Air Quality Standard** (**NAAQS**) for **ozone**. In order to meet the standard, there can be no more than three **exceedances** per site over a three-year period, so one year with an unusually high number of **exceedances** will not necessarily cause a violation. In St. Louis' case, the site that has been in violation, West Alton, had only one **exceedance** during 2002, which brought its three year total to three **exceedances**-the maximum allowable without being in violation. All other sites that had **exceedances** during 2002 were also under that level.

St. Louis One-Hour Ozone Attainment

The 1990 Amendments to the Clean Air Act set a deadline of Nov. 15, 1996, for complying with the **ozone** standard, but the Environmental Protection Agency (EPA) realized that some areas may be affected by air pollution transported from outside of **nonattainment areas**. In response to this realization, EPA allowed areas including St. Louis to apply for extensions to the **attainment** deadline. The St. Louis **nonattainment area** clearly demonstrated that emissions that came from outside the area were adversely impacting the air quality.

On June 26, 2001, EPA published a final rule in the Federal Register granting an **attainment** date extension for the St. Louis **ozone nonattainment area**. The St. Louis area was to retain its "moderate" **nonattainment** classification and have a new **attainment** deadline of Nov. 15, 2004. EPA determined that the plans submitted by Missouri and Illinois included sufficient control measures to demonstrate that the St. Louis area will reach the **national ambient air quality standard**.

However, on Nov. 25, 2002, the 7th Circuit Court ruled that EPA does not have the authority to extend the St. Louis **attainment** deadline under the Clean Air Act. The court sent the case back to EPA with instructions to bump up St. Louis to a "serious" **nonattainment area** effective immediately. This court ruling became final in January 2003, and on January 30, EPA published a final rule in the Federal Register making St. Louis a serious **nonattainment area**.

This action came on the heels of three years of complete, quality assured ambient air quality monitoring data for 2000-2002, demonstrating the St. Louis area's **attainment** with the one-hour **ozone** standard. A Redesignation Demonstration and Maintenance Plan for the St. Louis area has been submitted to EPA requesting that the St. Louis **nonattainment area** be redesignated as an **attainment** area for the one-hour **Ozone National Ambient Air Quality Standard** (**NAAQS**). On Jan. 30, 2003, the same date the bump up notice was published, EPA published a proposal to approve the redesignation request and maintenance plan. On May 12, 2003, the EPA published a final rule redesignating the St. Luis area to **attainment**. (See Page 9 for more information.)

NOx SIP Call

Because some **nonattainment areas** are affected by air pollution from sources outside the area, initiatives

involving the study of transported emissions and regional controls are becoming more common. In October 1998, EPA issued a rule known as the **Oxides of Nitrogen (NO_x) State Implementation Plan (SIP)** Call. This **NO_x SIP** Call would have required Missouri to reduce emissions of **NO_x**, a commonly transported air pollutant that contributes to **ozone** formation. EPA's modeling indicated that the transport of pollutants from Missouri contributes to **ozone** problems in Illinois, Indiana, Michigan and Wisconsin. After several legal challenges, EPA's **NO_x SIP** Call became effective for 19 of the 22 originally named states, excluding Missouri, Georgia and Wisconsin.

In 2000, the **Missouri Air Conservation Commission** adopted a statewide rule to reduce **NO_x** emissions. Missouri's statewide **NO_x** rule is intended to improve air quality in the St. Louis **ozone nonattainment area**. Missouri's statewide **NO_x** rule, 10 CSR 10-6.350, will reduce the emissions of **NO_x** from electric generating units and establish a **NO_x** emissions trading program for the entire state. Some facilities have started reducing their **NO_x** emissions ahead of schedule and have requested early reduction credits (ERCs) under the program.

EPA published a **NO_x SIP** call for eastern one-third of Missouri on Feb. 22, 2002, in the Federal Register. Missouri continues to evaluate the current statewide **NO_x** regulation and the **NO_x SIP** call to determine what its response will be.

Emissions Banking and Trading

The department participated in creating an amendment to the Missouri Air Conservation Law, which allows the development of an emissions banking and trading program for the **nonattainment** and maintenance areas in Missouri. This legislation became effective Aug. 28, 2001. It requires the **Missouri Air Conservation Commission** to adopt a rule that will set up a "Missouri Air Emissions Banking and Trading Program."

The department developed the rule through a workgroup process with interested parties, including facilities from the **nonattainment** and maintenance areas, environmental groups and EPA. The workgroup process began in October 2001 and was completed in March 2002. The department expects the final rule to be effective in March 2003.

Emissions banking and trading programs allow facilities to generate emission reduction credits (ERCs) by releasing less than the applicable emission standard for a particular pollutant. The ERCs can be banked, traded or sold to a different facility.

These programs are helpful to facilities that are planning to expand an existing operation or build an additional facility in a **nonattainment** or maintenance area. These programs are also economically beneficial to facilities that consistently emit below their allowable levels.

This program should help Missouri maintain the **National Ambient Air Quality Standards** established by the Clean Air Act while fostering economic growth. As established in the law, an environmental contribution of three percent will be subtracted from the bank of credits each year to protect air quality.

Gateway Clean Air Program

The Gateway Clean Air Program entered its third year of operation as an essential part of Missouri's efforts to bring St. Louis into **attainment** with the one-hour **ozone** standard. Even though the St. Louis area may now be deemed in compliance with the one-hour standard, the program will remain an important component of the plan to maintain the air quality and move toward further improvement under the new, stricter eight-hour **ozone** standard. The program tests vehicles in St. Louis, St. Charles and Jefferson counties and in the city of St. Louis, using an enhanced emissions testing procedure. Also, vehicle emissions testing entered the third year of operation in Franklin County, using an improved basic emissions test.

More information about this program can be by visiting the following Web sites: gatewaycleanair.com, www.dnr.mo.gov/alpd/apcp/gcap/ or www.cleanair-stlouis.com/gcap/.

Fuels

The department continues to develop methods for the St. Louis and Kansas City areas to reduce emissions of volatile organic compounds (VOCs) that contribute to the formation of ground-level **ozone**. St. Louis is required to reduce VOCs due to its status as an **ozone nonattainment area**, while the Kansas City reductions are contingency controls in response to violations of the one-hour **ozone** standard in 1995 and 1997.

Stage II Vapor Recovery is one of the most effective means of reducing **ozone**. The department has developed the Missouri Performance Evaluation Test Procedures (MOPETP) to ensure that the Stage I and II vapor recovery equipment in the St. Louis **ozone nonattainment area** meet the mandatory 95 percent efficient requirement. MOPETP is a comprehensive set of tests designed to determine the efficiency of gasoline vapor recovery systems and components. The department's Air Pollution Control Program approved a vapor recovery system called the Balance System. To date, 10 different manufacturers of vapor recovery equipment have been tested and approved. These manufacturers hold

MOPETP approvals for more than 100 components of the Balance System vapor recovery equipment.

As of Jan. 1, 2001, only MOPETP-approved systems and components are authorized for use in the St. Louis **ozone nonattainment area**. Auto manufacturers are in the process of conducting "Novel Facility" MOPETP testing to demonstrate these initial fueling facilities meet the efficiency requirements.

An operating permit process is used to ensure that vapor recovery equipment continues to function properly after being installed. To date, all service stations in the St. Louis **ozone nonattainment area** have applied for and received an initial operating permit. The operating permit requires facilities to pass tests prior to receiving a renewed operating permit. Operating permits are renewed on a five-year cycle.

Since June 1, 1999, retail gasoline stations in the St. Louis ozone nonattainment area are under federal requirements to sell reformulated gasoline (RFG). This is a gasoline formula designed to burn cleaner by adding of an oxygenate, such as ethanol, and adjusting the amount of various components already found in conventional gasoline. The fuel is required all year, not just during the summer. It reduces exhaust and evaporative emissions. The program is administered and enforced by EPA. Phase II of the **RFG** program, which began Jan. 1, 2000, requires additional emission reductions compared to Phase I. Phase II requires a minimum of 25 percent VOC reductions, a 20 percent reduction in air toxins, and a five to seven percent reduction in $\mathbf{NO_x}$ emissions. Another important benefit of the fuel program is that it helps the emission control equipment continue to perform well throughout the life of the vehicle.

In 2001, low Reid Vapor Pressure (RVP) gasoline was used during the summer months in the Kansas City **ozone** maintenance area. During summer months, low RVP gasoline evaporates less than conventional gasoline, which reduces emissions of VOCs. Low RVP gasoline was first required in St. Louis in 1994 and in Kansas City in 1997. In early 2001, an amendment was adopted to lower the summer RVP requirement in Kansas City from 7.2 pounds per square inch (psi) to 7.0 psi, beginning June 1, 2001. The 7.0 psi RVP requirement will help Kansas City maintain compliance with the **ozone** standard.

Emissions Fees Workgroup

In conjunction with public meetings held by the **Missouri Air Conservation Commission**, industry representatives and staff from the department's Air Pollution Control Program met with commission members in St. Louis, Kansas City and Osage Beach during fall 2001 to review the cost of efforts to reduce air pollution in Missouri. This workgroup looked at if the existing air emission fee was enough to fund all the efforts needed to comply with the federal Clean Air Act. The workgroup decided that an increase in the fee was needed to maintain existing air pollution control efforts in the state.

The department's Air Pollution Control Program proposed a rule amendment to raise the air emission fee and submitted the proposed rule amendment to the **Missouri Air Conservation Commission** at its March 28, 2002, public hearing. The Commission adopted the proposed rule amendment at its April 25, 2002, raising the fee from $25.70 to $31 per ton of regulated air pollutant.

Operating Permits

In 2002, the Operating Permit Unit started implementing the Governor's Streamlining Recommendations for operating permits (see Page 10),

accepted responsibility for many new initiatives and progressed toward issuing all of the initial Part 70 (Title V) Operating Permits. At year's end, 410 Part 70 Operating Permits, or 90 percent, had either completed the initial technical review, had been issued or closed out. Permits that had undergone technical review still need to be reviewed by the public and EPA. The process can be completed in two to three months, although comments from the public, EPA or routine objections received by the Air Pollution Control Program could delay this process.

One of the new initiatives carried out by the Operating Permit Unit in 2002 involved the 1990 Amendments to Section 112 of the Clean Air Act, which included a new section 112(j), entitled "Equivalent Emission Limitation by Permit." In states with a Title V program, section 112(j)(3) requires the owner or operator of a major source in a source category for which EPA failed to publish a section 112(d) standard to submit a permit application 18 months after the missed publishing deadline. The requirements for section 112(j) are contained in 40 CFR Part 63, Subpart B, *Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act, Sections 112(g) and 112(j)*. On April 5, 2002, 40 CFR Part 63, Subpart B, was amended and required installations to submit a 112(j) Part 1 application prior to May 15, 2002. The Air Pollution Control Program received 254 112(j) Part 1 applications.

The second new initiative undertaken by the Operating Permit Unit is the implementation of 10 CSR 10-6.350, *Emission Limitations and Emissions Trading of Oxides of Nitrogen*. The Operating Permit Unit assisted in the development of guidelines, database needs and procedures to put this rule into practice. In addition, the Operating Permit Unit reviewed and verified the **NO_x** early reduction credit requests for 2000 and 2001.

Overall, the Operating Permit Unit completed 765 permitting actions. Those actions involved Part 70, Intermediate and Basic Operating Permit applications (initial, renewal, amendments, administrative amendments, minor modifications and significant modifications), Operating Permit Applicability determinations, Section 112(j) determinations and **NO_x** Banking/Trading projects.

In 2002, the Air Pollution Control Program continued to post drafts of operating permits on the program's Web site for public review. The documents remain on the Web throughout the public notice process, to enable citizens to have easier access to the documents. To view the operating permit drafts, visit www.dnr.mo.gov/alpd/apcp/PermitPublicNotices.htm.

In addition to operating permit projects, the Operating Permit Unit is involved in rule revisions regarding 10 CSR 10-6.065, *Operating Permits*. In March 25, 2002, EPA published a notice of deficiency in the *Federal Register* for the Operating Permit Program. The Notice of Deficiency was in response to comments received form the Sierra Club and National Environmental Development Association/Clean Air Regulatory Project. The program met with the Sierra Club and EPA Region 7 to address these issues. The Notice of Deficiency was expected from EPA since some of the rule changes agreed to with EPA Region 7 could not be finalized by April 1, 2002, EPA's response date. The notice of deficiency pinpointed three areas of the operating permit rule that needed revisions: minor and significant modification procedures in regards to acid rain; certification by a responsible official for minor permit modifications; and contemporaneous notice of off-permit changes. The program has initiated the rule changes and expects to complete them within the 18-month time frame allotted in the notice.

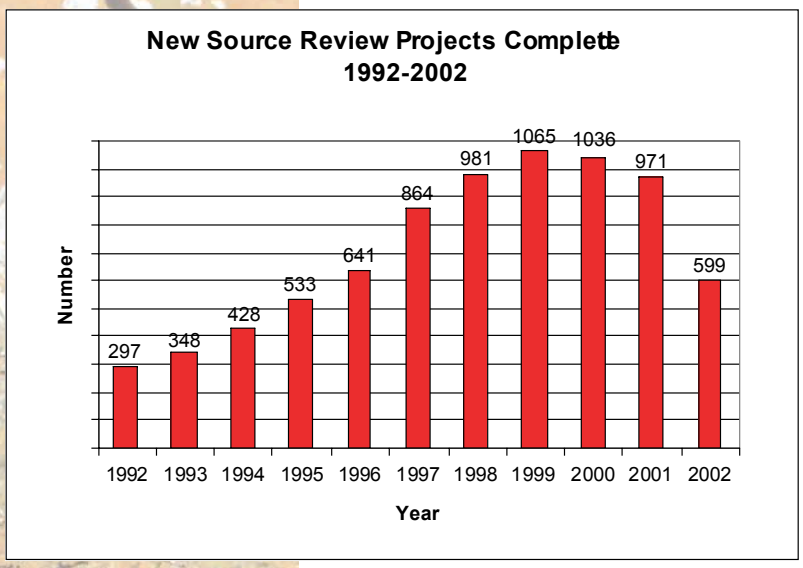
The Operating Permit Unit is entering the renewal phase for the first round of operating permits. The State sent out 614 letters in July 2002 informing installations of the expiration date of the respective operating permits. With the operating permit renewal comes 40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*. CAM plans submitted by the installations will be included in the renewal permits.

New Source Review Permits

In 2002, the New Source Review Unit (Construction Permits Unit) started implementing the Governor's Streamlining Recommendations for Construction Permits (see Page 10), completed approximately 600 projects and worked with the Initial Review Unit to expedite the permit process. The New Source Review/Initial Review Units received over 800 projects. The New Source Review Unit completed over 600 permit actions including major construction permits issued for Empire Electric, Continental Cement and Mississippi Lime Company. Creating and putting into practice the Initial Review Unit relieved the New Source Review Unit of over 200 projects. This allowed the New Source Review Unit to issue permits and respond to applicants in a more timely manner.

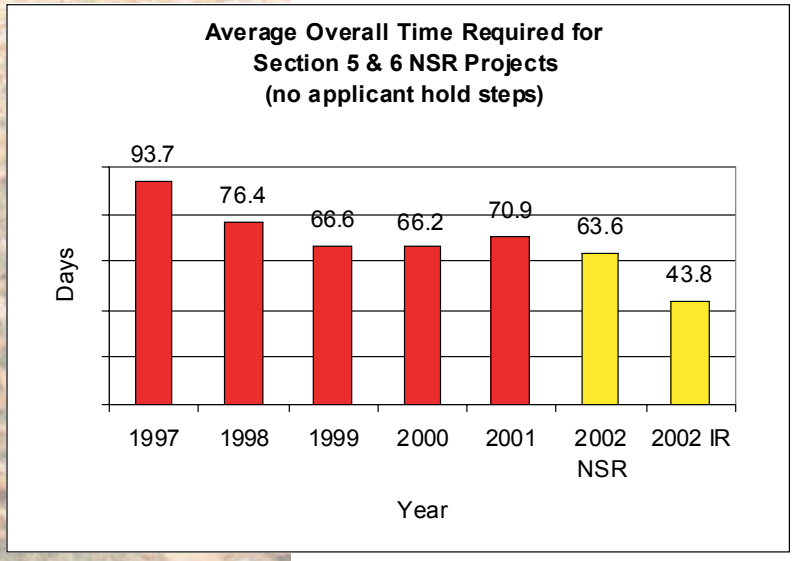
In 2002, the program continued to post drafts of construction permits that required public notices on the program's Web site for public review. To view draft construction permits visit www.dnr.mo.gov/alpd/apcp/PermitPublicNotices.htm.

Note: The 2002 project total does not include the New Source Review Projects processed by the Initial Review Unit.



Initial Review Unit

The Initial Review Unit successfully tackled many problems facing the Air Pollution Control Program's Permitting Section by speeding up the permit review process. The completeness checks performed by the unit have significantly reduced the number of days needed to process a construction permit. By screening out incomplete applications, the Initial Review Unit reduced the time that applications that are delayed in order to wait for additional information. The Initial Review Unit is responsible for administrative completeness checks, technical reviews, air quality analysis and draft permits for all stationary and portable sources including quarry operations, asphalt plant and concrete batching operations. The chart below shows an example of the progress made by the Initial Review Unit in its first year.



Enforcement Actions and Results

The department's Air Pollution Control Program performed 1,682 stationary source inspections in the 2002 calendar year. The program also issued 1168 Notices of Violation (NOVs). Settlements were reached in 214 cases. These settlements resulted in paid penalties totaling $491,813 and suspended penalties totaling $405,483. The department referred 20 cases to the Missouri Attorney General's Office.

Asbestos

Federal regulations require that all buildings must be inspected for the presence of asbestos-containing materials (ACM) before being renovated or demolished. A Missouri-certified inspector must conduct the inspection. In most cases, ACM must be removed before beginning renovation or demolition. During 2002, the Air Pollution Control Program received notification of approximately 420 regulated projects and conducted approximately 130 inspections.

Under certain conditions, owners or contractors of renovation operations must submit a notice of intent to renovate a structure to the Air Pollution Control Program for review and approval 10 working days prior to the start of the project. This is required when the project involves regulated asbestos containing materials in quantities of 160 square feet, 260 linear feet or 35 cubic feet off of facility components. Owners or contractors must also submit a similar 10 working day notice for demolition

operations involving a regulated structure. The notice for demolition, however, is required for all regulated structures regardless of whether the structure contains any asbestos containing materials. Residential structures with four or fewer dwelling units are not subject to the regulations. However, when more than one residential structure is involved on the same city block per one-year period, or if the residential structure will be used for fire training, the regulations apply.

Only a registered asbestos abatement contractor can perform asbestos abatement activities involving regulated asbestos containing materials. Contractors are required to register with the department on an annual basis. This registration ensures that contractors continue to meet the department's requirements to perform asbestos abatement work. Currently, the department has 112 asbestos contractors registered with the department.

Individuals who want to work on asbestos related as a worker, supervisor, inspector, management planner, project designer, or air sampling professional must also obtain occupational certification from the department. Certification is required to make sure that these individuals meet all of the requirements to work in their respective discipline including having attended the appropriate training course offered by a Missouri-accredited training provider. Currently the department has certified 1,369 asbestos workers, 931 asbestos supervisors, 468 inspectors, 130 management planners, 77 project designers, and 300 air sampling professionals. Individuals who wish to maintain their certification must attend annual refresher training and reapply annually.

To make sure that the training received by individuals pursuing asbestos occupational certification is adequate, training providers must have their training programs accredited by the department. Training Providers are required to have their programs re-accredited biennially, and are periodically audited to make sure that they continue to comply with all applicable rules, regulations and policies. Currently, the department has accredited 25 training providers to provide asbestos-related training. During the past year, the department has performed 16 audits of these providers to make sure they are providing adequate training to these individuals.

Concentrated Animal Feeding Operations

The **Missouri Air Conservation Commission** has passed regulations that limit the amount of acceptable odor from Concentrated Animal Feeding Operations (CAFOs). The odor regulations designate the use of a scentometer as a screening tool. The rules states that if an odor is detectable at a dilution ratio of 5.4 parts of carbon filtered air to 1 part odor laden air with a scentometer then an air sample should be collected and sent to an olfactometry laboratory. The olfactometry laboratory would then use an odor panel to determine the detection threshold and the intensity of the odor of the sample. If the olfactometry laboratory determined the detection threshold to be above seven or the intensity level to be above a level equivalent to 225 ppm of n-butanol, then the source of odor would be in violation. The odor rules were to be fully implemented by Jan. 1, 2002.

The CAFO odor rules came under scrutiny at the Dec. 6, 2001, **Missouri Air Conservation Commission** meeting. Premium Standard Farms (PSF) voiced concerns with the wording of the rule, specifically the detection threshold limit of seven in the CAFO portion of the rule (10 CSR 10-3.090(5)(C)(2)(A)). PSF and the Air Pollution Control Program independently determined that the olfactometry detection threshold of seven in the rule was too low. At the request of the commission, the program stated at the December 2001 commission meeting that they would use enforcement discretion until the rule could be reevaluated.

The program conducted research to determine if the numbers used in the rule are too low for the regulatory standard and too high for the current n-butanol standard. The detection threshold stated in the rule will be changed from seven to a number that will correlate roughly with a 7:1 scentometer level to insure consistency in the odor related rules. This research included data collection to determine how the rule should be changed. Over 150 scentometer readings and olfactometry samples were collected in the field. An appropriate detection level was determined from this research and levels suggested in the literature.

Missouri Emissions Inventory System

An online data entry system developed by the department is enabling companies to electronically submit emissions data required annually. The new Missouri Emissions Inventory System (MoEIS) cuts the time it takes a company to complete its Emissions Inventory Questionnaire (EIQ), which is due April 1. MoEIS pulls the static data about a facility from year to year, reducing the amount of data entry involved. Companies need only to enter the information that changes, such as annual throughputs and certain worksheets. MoEIS also has built-in quality checks to help ensure accurate data entry. As of the end of February, 32 facilities had submitted their EIQs via MoEIS online.

In order to promote submitting EIQs online, from December 2002 through February 2003, the department offered 12 workshops throughout the state to show companies how to use the software. More than 300 consultants and industry representatives attended the workshops. Workshop participants received a user ID and password as well as an interactive training CD.

Facilities that did not attend the workshops can acquire a user ID and password by contacting the department's Air Pollution Control Program. The Air Pollution Control Program's staff also is available to help facilities and answer questions. Staff can be reached via the Web at www.dnr.mo.gov/prod/moeis/main/contactus or by calling the toll-free hotline, 1-866-MoEIS4U or (573) 751-4817. For more information about MoEIS visit www.dnr.mo.gov/alpd/apcp/MOEISupdate.htm

The Small Business Assistance Program

Small businesses are often focused on day-to-day operations and may find it difficult to keep up with changing air pollution regulations and requirements. Section 507 of the 1990 federal Clean Air Act Amendments recognized this and required states to develop a three-component assistance program to help small businesses. The three components are a small business ombudsman, a technical assistance program for small businesses and a compliance advisory panel. In Missouri, the compliance advisory panel is known as the Small Business Compliance Advisory Committee.

The Small Business Compliance Advisory Committee has six members. Two are appointed by the governor, one each is appointed by the majority and minority leaders of the Missouri House and Senate, and one is appointed by the director of the Department of Natural Resources. The committee has the following responsibilities:

- Receive reports from the small business ombudsman (governor's office);
- Evaluate the impact of the Air Conservation Law and related regulations on small business;
- Make recommendations to the Department of Natural Resources, the **Missouri Air Conservation Commission** and the General Assembly regarding changes in procedure, rule or law that would help small businesses comply with the Air Conservation Law;
- Make recommendations to the **Missouri Air Conservation Commission** on rules to expedite the review of modifications for small business; and
- Conduct hearings and make investigations consistent with the purposes of the small business technical assistance activities.

Currently there are six people serving on the committee chaired by Jack Lonsinger. Jack Lonsinger, Dan Bunch and Doug Weible represent industry. Bruce Morrison and Caroline Pufalt represent the general public. Walter Pearson represents the Department of Natural Resources.

Small businesses face compliance issues in environmental areas other than air pollution. Steve Mahfood, Director of the Department of Natural Resources, asked the Small Business Compliance Advisory Committee to expand its scope to deal with these other issues.

The Outreach and Assistance Center, a non-regulatory service of the Department of Natural Resources, offers small business technical assistance activities. Outreach and Assistance's business assistance unit carries out the activities and provides administrative support to the Small Business Compliance Advisory Committee. The mission of the department's Outreach and Assistance Center is to provide information, assistance, education and training to business owners, farmers, local governments and the general public on how to control or reduce pollution. For more information, contact the Outreach and Assistance Center at 1-800-361-4827 or (573) 526-6627.

Cooperative Development of Regulations

Involving the public, environmental groups and industry in the process of making air quality rules helps to create fair, effective regulations that have broad support. In 2002, the department continued its commitment to public participation by convening workgroups to help develop air regulations. A workgroup brings industry and the public together with government agencies to share concerns and exchange ideas while developing regulations.

For example, the department worked with leaders from industry, environmental organizations and local governments to improve air quality in the Kansas City area. To help develop an air quality improvement plan for the Kansas City **ozone** maintenance area, the department participated as a member of the Mid-America Regional Council. The Kansas City **ozone** maintenance area includes Johnson and Wyandotte counties in Kansas and Clay, Jackson and Platte counties in Missouri.

In addition, the department actively participates in air quality meetings of the two major metropolitan planning organizations and the East-West Gateway Coordinating Council in St. Louis. At these public meetings, the department provides updates on air quality projects and discusses issues, proposed rules and plans with other participants.